REMARKS ON PROFESSOR LYLE'S POSTULATE I. OF EUCLID'S ELEMENTS.

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Professor Lyle, in No. 1 of THE AMERICAN MATHEMATICAL MONTHLY, falls into an error, through misapprehending the meaning of Lobatschewsky.

According to Lobatschewsky the angle-sum of a rectilineal triangle decreases as the area of the triangle increases, but is always less than two right angles.

Lobatschewsky' sgeometry does not apply to the plane, nor to space as we know it, but to what has since been termed a pseudospherical surface,or one of uniform negative curvature in the same sense that the surface of a sphere is of uniform positive curvature. Such a surface cannot be fully constructed,and the theorems of Lobatschewsky are seemingly impossible; but his geometry is consistant with itself and contradicts none of the postulates or axioms of Euclid except the 12th. His straight line is not, (it is true,) really straight, but is the shortest distance between two points, and lying wholly in the given space. A straight line may be drawn between any two points in the space, and a triangle can be formed of three straight lines joining any three points.

This being premised, the Professor's first error is in defining a finite straight line as one that has two ends, and in confounding "infinite" and "boundless". He may refer to a *terminated* straight line, and his definition is then correct.

Now, it is true, a straight line can be drawn from any point in AC to any point in CB, and the triangle ECF will have an angle-sum greater than two right angles$-a$. This however, is not contrary to the hypothesis that the angle-sum shall be less than two right angles. No matter how small a is taken it can still be divided. Though the angle C be as nearly equal to two right angles as you choose yet E and F, taken together, will not entirely make up the difference. If a is taken infinitely small the area of the triangle ECF will be infinitely small, and its angle-sum will differ from two right angles by less than any assignable quantity.

MORE REMARKS ON DIVISION.

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An introduction of half a hundred lines from ancient history, overshadowing a mere assertion as a conclusion, might give these remarks an air of profundity, but that species of pedantry, being an "idol" which neither Gauss nor Argand has yet knocked down, is a pet whose sacred form profane hands must not pollute.